

REMARKS

Claims 1-10 are pending and under consideration in the above-identified application.

In the Office Action, Claims 1-10 were rejected.

In this Amendment, Claims 1, 5, 6 and 10 are amended, and Claims 4 and 7 are cancelled. No new matter has been introduced as a result of this Amendment.

Accordingly, Claims 1 – 3, 5, 6 and 8 – 10 remain at issue.

I. 35 U.S.C. § 102 Anticipation Rejection of Claims 1 and 3

Claims 1 and 3 were rejected under 35 U.S.C. § 102(b) as being anticipated by Nakao et al. (“Nakao”) (U.S. Patent No. 6,088,075).

Claim 1 has been amended by incorporating the substantive limitations of Claim 4. Claim 1 is directed to a light control device. The light control device comprises opposing substrates with a gap therebetween; liquid crystal in the gap sealed between the opposing substrates, the liquid crystal being a polymer network liquid crystal; optically transparent electrodes on gap-side surfaces of each of the opposing substrates and in contact with the liquid crystal; *an image processing unit which detects a luminance signal of the liquid crystal; a temperature detecting unit which detects a temperature of the liquid crystal; and a pulse control unit which controls a width of a pulse of an applied voltage for driving the liquid crystal, the pulse control unit controlling the width of said pulse according to both of the temperature detected by the temperature detecting unit and the luminance detected by the image processing unit.* The gap between the opposing substrates along an effective optical path has a width between about 4 μ m and about 11 μ m.

That is, the claimed light control device comprises an image processing unit which detects a luminance signal of the liquid crystal, a temperature detecting unit which detects a temperature of the liquid crystal, and a pulse control unit which controls a width of a pulse of an applied voltage for driving the liquid crystal, according to both of the temperature detected by the temperature detecting unit and the luminance detected by the image processing unit.

In remarks made regarding Claim 4, the Examiner acknowledged that Nakao fails to teach a temperature detecting section (unit) or a pulse control unit, and advanced that Hosoyamada does and points to FIG. 2 and column 6, lines 3 -19 for support.

Hosoyamada does disclose a temperature control circuit 5 for setting the drive voltage of the liquid crystal layer 21 via the source drive circuit (pulse control unit) 7. However, Hosoyamada does not teach or suggest that the pulse control unit also controls a width of a pulse of an applied voltage for driving the liquid crystal according a luminance of the liquid crystal layer which is detected by an image processing unit, in addition to the temperature detected by the temperature detecting unit. As such, no combination of Nakao and Hosoyamada fairly teaches or suggests a pulse control unit which controls a width of a pulse of an applied voltage for driving the liquid crystal, according to both of the temperature detected by the temperature detecting unit and the luminance detected by the image processing unit.

Thus, Claim 1 is patentable over Nakao and Hosoyamada, taken singly or in combination with each other, as is dependent Claim 3, for at least the same reasons.

Accordingly, Applicant respectfully request that this claim rejection be withdrawn.

II. 35 U.S.C. § 102 Anticipation Rejection of Claims 1 - 3

Claims 1- 3 were rejected under 35 U.S.C. § 102(b) as being anticipated by Asada (JP 2001-209035). This rejection is respectfully traversed.

Although Asada discloses a relation between a liquid crystal optical shutter and an applied voltage, Asada fails to disclose a pulse control unit that controls a width of a pulse of an applied voltage for driving the liquid crystal, according to both a temperature detected by a temperature detecting unit and a luminance detected by an image processing unit, as required by Claim 1. Thus, Claim 1 is patentable over Asada, as are dependent Claims 2 and 3, for at least the same reasons.

Accordingly, Applicant respectfully request that this claim rejection be withdrawn.

III. 35 U.S.C. § 103 Obviousness Rejection of Claim 2

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakao.

Claim 2 is dependent on Claim 1, shown above to be patentable over Nakao. Thus, Claim 2 is also patentable over Nakao, for at least the same reasons.

Accordingly, Applicant respectfully request that this claim rejection be withdrawn.

IV. 35 U.S.C. § 103 Obviousness Rejection of Claims 4 – 8 and 10

Claims 4-8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakao in view of Hosoyamada.

Claims 4 and 7 have been cancelled. As such, their rejection is moot.

Claims 5 and 10 are dependent on Claim 1, shown above to be patentable over Nakao in view of Hosoyamada. Thus, Claims 5 and 10 are also patentable over these references, for at least the same reasons.

Claim 6 recite the same distinguishable limitation as that of Claim 1, shown above to be allowable over Nakao in view of Hosoyamada. As such, Claim 6 is also patentable over these references, taken singly or in combination with each other, as is dependent Claim 8.

Accordingly, Applicant respectfully request that this claim rejection be withdrawn.

V. 35 U.S.C. § 103 Obviousness Rejection of Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakao as applied to claims 1- 3 and the combination of Nakao and Hosoyamada as applied to claims 4-5 above, and further in view of Yanagida et al. (“Yanagida”) (U.S. Publication No. 2002-0097369).

Claim 9 is dependent on any of Claims 1 to 5, which have been shown to be patentable over Nakao and Hosoyamada. Moreover, the United States Patent Publication No. US 2002/0097369 to Yanagida et al., owned by Sony Corporation was pending as of the June 15, 2005 filing date of the present patent application, which is assigned with 100 percent interest to Sony Corporation. As such, the subject matter disclosed in the Patent Publication No. 2002/0097369 and the presently claimed invention were at the time the present invention was made owned by the same entity, namely Sony Corporation. Therefore, under 35 U.S.C. § 103 (c) this subject matter disclosed in the Patent Publication No.: US 2002/0097369, which qualifies as prior art under subsection (e), (f), and (g) of 35 U.S.C. § 102, does not affect patentability of the present patent application.

Thus, Claims 1 and 5 are patentable over Nakao, Hosoyamada and Yanagida, taken singly or in combination with each other, as is dependent Claim 9 for at least the same reasons.

Accordingly, Applicants respectfully request that these claim rejections under 35 U.S.C. § 103(a) be withdrawn.

VI. Conclusion

In view of the above amendments and remarks, Applicant submits that Claims 1 – 3, 5, 6 and 8 – 10 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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